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February 11, 2003
AET 03-0001

Mr. Martin J. Virgilio
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

American Centrifuge Lead Cascade Facility (Lead Cascade)
Docket Number 70-7003
Submittal of License Application for the American Centrifuge Lead Cascade Facility

Dear Mr. Virgilio,

Introduction to the American Centrifuge Lead Cascade Facility

USEC Inc. (USEC) is pleased to submit six (6) copies (as required by 10 CFR 70.21(a)(2)) of an application for a 10 CFR Part 70 license to possess and use special nuclear, source, and by-product material in the American Centrifuge Lead Cascade Facility (Lead Cascade). The Lead Cascade is a test and demonstration facility to be located at the Portsmouth Gaseous Diffusion Plant (PORTS) in Piketon, Ohio. The facility will possess up to 250 kilograms of uranium hexafluoride (UF₆) and will consist of up to 240 operating, full-scale centrifuge machines arranged in a cascade configuration. The enriched UF₆ product from the centrifuge cascade will be recombined with the depleted UF₆ stream and will be re-fed to the cascade. No enriched product will be withdrawn, except for laboratory samples necessary to confirm enrichment performance. USEC is requesting that the NRC grant a license for the Lead Cascade by February 2004 for a license period of five (5) years.

The primary mission of the Lead Cascade is to obtain information on American Centrifuge technology that is necessary to support decisions regarding deployment of a commercial enrichment plant using this technology. Thus, the Lead Cascade is an important step toward advancing the national energy security goal of maintaining a reliable and economical domestic source of enriched uranium.

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Mr. Martin Virgilio
February 11, 2003
AET 03-0001, Page 2

Pre-Application Meetings

In 2002, USEC and the NRC held several pre-application meetings to discuss various aspects of the scope, content, and schedule for the Lead Cascade license application. Except in cases where proprietary or classified information was discussed, these meetings were open to and attended by members of the public. The license application submitted herein is consistent with USEC presentations as well as NRC feedback. For example, consistent with the approach presented by USEC, the Lead Cascade application incorporates and/or uses as a basis some of the programs reviewed and approved by the NRC under 10 CFR Part 76 for the NRC Certificate of Compliance for operation of the Portsmouth Gaseous Diffusion Plant (Certificate Number GDP-2). These programs so incorporated in the Lead Cascade application were determined to be applicable because programmatic features are independent of the enrichment technology (gaseous diffusion or gas centrifuge) or they could be made to be applicable to centrifuge technology after only minor modifications. More importantly, utilizing these NRC-approved programs will provide a consistent site basis for operations of the Lead Cascade at PORTS. Examples of these programs include Radiation Protection (described in Chapter 4.0 of the license application) and Fire Safety (described in Chapter 7.0 of the license application).

License Application

USEC has undertaken a disciplined approach to ensure the completeness of the license application. This approach involved a multi-step internal and external review process to ensure that the application conforms to applicable NRC regulatory requirements and applicable NRC guidance documents. First, Subject Matter Experts (SMEs) developed the information in the individual chapters of the license application. Next, a multi-disciplinary Technical Review Team reviewed the assembled chapters and provided comments for resolution by the SMEs. One of the tools used by the Technical Review Team is a "mapping matrix" that shows where in the application the applicable criteria in NUREG-1520 (Reference 1) are satisfied. Finally, an Independent Review Team made up of internal and external experts in the regulatory and licensing processes completed a detailed review of the application. As a result of this process, USEC believes that the license application complies with the applicable regulatory requirements in 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material," the substance of the guidance in NUREG-1520, and the NRC feedback provided to USEC during the pre-application meetings. Since USEC expects the NRC to fully recover licensing fees associated with the review of this application in accordance with 10 CFR 170.13 Schedule Item 1.A, no application fee is required.

Environmental Report

In support of the application, USEC also submits herein fifteen (15) copies of an Environmental Report (as required by 10 CFR 51.66) for the Lead Cascade. The Environmental Report has been similarly reviewed for completeness and USEC is confident that it complies with applicable

Mr. Martin Virgilio
February 11, 2003
AET 03-0001, Page 3

regulatory requirements in 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the substance of guidance in NUREG-1748 (Reference 2), and NRC feedback provided to USEC during the pre-application meetings. USEC believes that the Environmental Report supports a finding of no significant impact (FONSI) for the activities associated with the Lead Cascade. This conclusion is not surprising since PORTS is a fully industrialized site and the Lead Cascade will utilize existing buildings at PORTS that were specifically designed to accommodate centrifuge technology.

Safety Analysis

A key element supporting the Lead Cascade license application is the Integrated Safety Analysis (ISA) and the ISA Summary that is derived from the ISA. The ISA and ISA Summary complies with the applicable regulatory requirements in 10 CFR 70 Subpart H, "Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material," the substance of the guidance in NUREG-1513 (Reference 3), and NRC feedback provided to USEC during the pre-application meetings. Due to its security classification, USEC is submitting the ISA Summary to the NRC under separate cover.

Details regarding the design and operation of the Lead Cascade are contained in the ISA Summary. Various aspects of the centrifuge technology employed in the Lead Cascade are proprietary to USEC and would be beneficial to a competitor. In addition, the U.S. Department of Energy (DOE) classifies a significant portion of centrifuge technology up to the Secret-Restricted Data level. Access to classified information requires a security clearance and a "need-to-know." Since the ISA Summary contains USEC proprietary information, export control information and classified information, USEC will request that the NRC withhold the ISA Summary from public disclosure.

However, USEC recognizes and supports that, to the extent permitted, nuclear regulation must be transacted publicly to provide confidence that adequate safety measures are being implemented to protect workers, the public, and the environment. Consequently, upon completion of DOE reviews, USEC will provide the NRC with a redacted version of the ISA Summary that would be releasable to the public. The redacted version will delete USEC proprietary information, export control information, and classified information.

Plans, Programs and Other Documents

In July 2002, USEC submitted the Security Program and a Quality Assurance Program Description for the Lead Cascade to the NRC for review and approval (References 4 and 5, respectively). These documents are currently under NRC review. Included with the submittal of the license application is a Decommissioning Funding Plan for the Lead Cascade. In accordance with NRC regulations, the Fundamental Nuclear Materials Control Plan (FNMCP) is a proprietary document. Consequently, USEC is providing the NRC with a FNMCP for the Lead Cascade under separate cover.

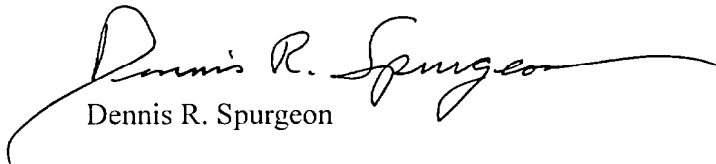
Mr. Martin Virgilio
February 11, 2003
AET 03-0001, Page 4

Additional and Future Actions

On June 17, 2002, USEC and DOE entered into an agreement that sets forth a schedule and framework for USEC, working cooperatively with the DOE, to develop and deploy American Centrifuge technology. This agreement includes a June 2003 milestone for USEC to obtain NRC's acceptance of the license application for formal review. USEC would appreciate NRC completion of its initial administrative review to permit NRC acceptance of the license application for formal review as soon possible. It is understood that further NRC formal review may identify the need for additional information from USEC. USEC is ready to assist the NRC to expedite the initial administrative review and subsequent technical reviews. In this regard, we are providing the NRC with CD-ROM versions of the documents transmitted by this letter. The CD-ROM will be in text searchable format to facilitate the NRC review and the development of the Safety Evaluation Report and Environmental Assessment that will accompany the issuance of the license for the Lead Cascade.

Finally, in a public meeting on February 19, 2003, USEC will present a synopsis of the license application to the NRC. If there are any questions regarding this application, please contact USEC's Manager of Advanced Technology Licensing, Mario Robles, at 301-564-3408.

Sincerely,



Dennis R. Spurgeon

cc: J. Giitter, NRC HQ
Y. Faraz, NRC HQ
L. Brown, DOE
D. Jackson, DOE
A. Howard, NEI (w/o enclosures)

Enclosures:

- License Application for the American Lead Cascade Facility (6 copies)
- Environmental Report for the American Lead Cascade Facility (15 copies)
- Decommissioning Funding Plan for the American Lead Cascade Facility (6 copies)
- CD-ROM of above documents (1 copy)

Mr. Martin Virgilio
February 11, 2003
AET 03-0001, Page 5

References:

1. NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," January 2002.
2. NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," September 2001 (Draft Report – For Interim Use and Comment)
3. NUREG-1513, "Integrated Safety Analysis Guidance Document," May 2001
4. USEC Letter AET 02-0004, "Submittal of Lead Cascade Security Plan," July 3, 2002.
5. USEC Letter AET 02-0005, "Submittal of Gas Centrifuge Quality Assurance Program Description," July 19, 2002.